

### **AMENDMENTS TO THE CLAIMS**

The listing of claims below will replace all prior versions and listings of claims in the application.

Claim 1. (Original) An EL fiber having a function of emitting ultraviolet light or visible light with a wavelength of 400 nm or less, the EL fiber characterized in that the cross-sectional structure of the fiber comprises an internal electrode located at the center in a radius direction, an internal insulating layer disposed around the internal electrode, a light-emitting layer, an external electrode, and a protective layer disposed on an outermost surface, and the light is emitted by application of an alternating current electric field between the electrodes.

Claim 2. (Original) The EL fiber according to Claim 1, wherein an external insulating layer is disposed between the light-emitting layer and the external electrode.

Claim 3. (Original) An EL fiber having a function of emitting ultraviolet light or visible light with a wavelength of 550 nm or less, the EL fiber characterized in that the cross-sectional structure of the fiber comprises an internal electrode located at the center in a radius direction, an internal insulating layer disposed around the internal electrode, a light-

emitting layer, an external electrode, a protective layer, and a particle layer or a thin film disposed on an outermost surface and formed from a material having a photocatalytic function, and the light is emitted by application of an alternating current electric field between the electrodes.

Claim 4. (Original) The EL fiber according to Claim 3, wherein an external insulating layer is disposed between the light-emitting layer and the external electrode.

Claim 5. (Currently Amended) The EL fiber according to Claim 3 ~~or Claim 4~~, wherein the protective layer itself is formed from a material having a photocatalytic function.

Claim 6. (Currently Amended) The EL fiber according to ~~any one of Claims 3 to 5~~, Claim 3, wherein the material having a photocatalytic function is  $\text{TiO}_2$  and/or  $\text{TiO}_2$  doped with at least one type of element of N, S, Mn, Fe, Co, Zn, and Cu.

Claim 7. (Currently Amended) The EL fiber according to ~~any one of Claims 1 to 4~~, Claim 1, wherein the light-emitting layer has a structure in which fluophor particles having a

function of emitting visible light or ultraviolet light are dispersed in a matrix containing at least one type of a dielectric resin and a dielectric ceramic.

Claim 8. (Currently Amended) The EL fiber according to ~~any one of Claims 1 to 4~~ Claim 1, wherein the fluophor constituting the light-emitting layer containing ZnS as a first primary component and, as second components, a first additional element constituting an acceptor level and a second additional element constituting a donor level in a semiconductor partly including or not including a group II-IV compound semiconductor.

Claim 9. (Original) The EL fiber according to Claim 8, wherein the first additional element is at least one type of Cu, Ag, Au, Li, Na, N, As, P, and Sb, and the second additional element is at least one type of Cl, Al, I, F, and Br.

Claim 10. (Original) The EL fiber according to Claim 8, wherein the first additional element is Ag.

Claim 11. (Original) The EL fiber according to Claim 8, wherein the semiconductor of the second component contains at least one type of MgS, CaS, SrS, BeS, and BaS.

Claim 12. (Currently Amended) The EL fiber according to any one of ~~Claims 1 to 4~~ Claim 1, wherein the average particle diameter of the fluophor constituting the light-emitting layer is 10 nm or less.

Claim 13. (Currently Amended) A photocatalytic reactor comprising the EL fiber according to ~~any one of Claims 1 to 4~~ Claim 1.

Claim 14. (Currently Amended) A photocatalytic reactor having a structure in which the EL fiber according to ~~any one of Claims 1 to 4~~ Claim 1 and a photocatalytic fiber are combined in alternate position.

Claim 15. (New) The EL fiber according to Claim 3, wherein the light-emitting layer has a structure in which fluophor particles having a function of emitting visible light or ultraviolet light are dispersed in a matrix containing at least one type of a dielectric resin and a dielectric ceramic.

Claim 16. (New) The EL fiber according to Claim 3, wherein the fluophor constituting the light-emitting layer containing ZnS as a first primary component and, as second components, a first additional element constituting an acceptor level and a second

additional element constituting a donor level in a semiconductor partly including or not including a group II-IV compound semiconductor.

Claim 17. (New) The EL fiber according to Claim 3, wherein the average particle diameter of the fluophor constituting the light-emitting layer is 10 nm or less.

Claim 18. (New) A photocatalytic reactor comprising the EL fiber according to Claim 3.

Claim 19. (New) A photocatalytic reactor having a structure in which the EL fiber according to Claim 3 and a photocatalytic fiber are combined in alternate position.